

# LAND RECLAMATION COMMISSION

STATE OF MISSOURI

P.O. BOX 176

JEFFERSON CITY, MISSOURI 65102

573-751-4041

## Permit To Engage in Surface Mining

LAND RECLAMATION COMMISSION

ISSUES TO  
U.S. SILICA COMPANY

Pursuant to "The Land Reclamation Act," RSMo, 2001, and on conformity with the statements

In the application, a permit is hereby granted to engage in surface mining of

Industrial sand in the state of Missouri. The extent of the

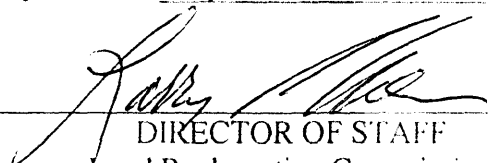
Proposed mining operation(s) will be on 140.5 acres, more or less.

The locations of the operation(s) under this permit is/are as follows: Renewal

County	Section	Township	Range	Acres Renewed	Acres New	Total Acres	Site/Stream Name	Site Number
St. Louis	06, 07	43N	03E	140.5	0	140.5	Pacific #1	0518

This permit may be suspended or revoked upon violation of any or all of the conditions set forth in "The Land Reclamation Act," RSMo. 2001, or in such rules and regulations as are promulgated pursuant thereto by the Land Reclamation Commission.

IN WITNESS WHEREOF I have hereunto set my hand this 28th day of July 2004

  
DIRECTOR OF STAFF  
Land Reclamation Commission

Permit No. 0526  
Effective Date 08/27/2004  
Expiration Date 08/26/2005

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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
**PERMIT RENEWAL FOR INDUSTRIAL MINERAL MINES**

JUL - 9 2004

P.O. BOX 176  
JEFFERSON CITY, MO 65102-0176

NAME OF CORPORATION, COMPANY, PARTNERSHIP OR INDIVIDUAL <b>U.S. Silica Company - Pacific Plant</b>		MISSOURI LAND RECLAMATION COMMISSION		DATE <b>07/07/04</b>
ADDRESS <b>819 East Osage</b>	CITY <b>Pacific</b>	STATE <b>MO</b>	ZIP CODE <b>63069</b>	
CONTACT PERSON <b>C. William Kreamer, Jr.</b>		TELEPHONE NUMBER <b>(636) 257-2464</b>		

**FEES: COMPLETE SECTION I OR SECTION II****SECTION I. Fees: Open pit operators and those mining more than 5,000 tons of sand and/or gravel:****1. To compute the site fee complete the information below:**

SITE NAME OR NUMBER (add a separate sheet for additional sites)	Mark each month that the site will be operated during the permit year	For sites operated less than six months per permit year pay \$150 For sites operated six months or more per permit year pay \$300
1. #526 - Pacific #1	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$ 300
2.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
3.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
4.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
5.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
6.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
7.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
8.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
9.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
10.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
TOTAL SITE FEE		\$

2. Acreage Fee \$5 x 140.5 number of acres bonded .....\$702.50

3. Annual Permit Fee .....\$ 500

4. Total Fee (Add totals from 1, 2 and 3).....\$1502.50

NOTE: If Total Fee exceeds \$2,500.00 then pay only .....\$ 2,500

**SECTION II. FEES: Sand or gravel operators mining less than 5,000 tons per year:**

1. Annual Permit Fee .....\$ 300

SIGNATURE OF APPLICANT <b>Gregory S. Fell</b>	TITLE <b>Manager Environmental Dept.</b>	DATE <b>07/07/04</b>
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Appeared before me this 7th day of July, 2004,  
to me personally known, who executed the above as their free acts and deeds.

NOTARY PUBLIC EMBOSSEER SEAL	STATE OF <b>West Virginia</b>	COUNTY (OR CITY OF ST. LOUIS) <b>Morgan</b>
	SUBSCRIBED AND SWORN BEFORE ME, THIS <u>7th</u> DAY OF <u>July</u> YEAR <u>2004</u>	
	NOTARY PUBLIC SIGNATURE <i>Sharon K. Mellott</i>	MY COMMISSION EXPIRES <u>10/20/2013</u>
	NOTARY PUBLIC NAME (TYPED OR PRINTED) <b>Sharon K. Mellott</b>	

**USE RUBBER STAMP IN CLEAR AREA BELOW**

Notary Public, State of West Virginia  
Sharon K. Mellott  
U.S. Silica Company  
P.O. Box 187  
Berkeley Springs, WV 25411  
My commission expires October 20, 2013

FOR DEPARTMENT USE ONLY: APPROVED BY <i>Michael J. Hunk</i>	DATE APPROVED <u>7/16/05</u>	PERMIT NUMBER <u>0526</u>	EXPIRATION DATE <u>8/26/05</u>
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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
**SITE INFORMATION FORM**

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To be completed for each separate area of disturbance associated with mining operations.

SITE NAME OR NUMBER <b>Pacific #1</b>		PERMIT NUMBER <b>#526</b>
COMPANY NAME <b>U.S. Silica Company</b>		
COUNTY <b>St. Louis</b>	1/4 SECTION <b>SE NE</b>	SECTION <b>6</b>
TOWNSHIP <b>T43N</b>	RANGE <b>R3E</b>	ACRES <b>56.5 Existing 84.0 New 140.5 TOTAL</b>
RIVER OR STREAM NAME (FOR IN-STREAM ACRES) <b>N/A</b>		
MINERAL COMMODITY <b>Industrial Sand</b>		ESTIMATED TONS/YEAR (FOR GRAVEL SITES) <b>500,000 TPY</b>

NAME OF LANDOWNER (ATTACH LIST IF MORE THAN ONE) <b>U.S. Silica Company</b>		
ADDRESS <b>PO Box 187</b>		
CITY <b>Berkeley Springs</b>	STATE <b>WV</b>	ZIP CODE <b>25411</b>
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input checked="" type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE): <b>6/24/68, pg. 6636/246; 5/21/80, pg. 7251/231 9/16/80, pg. 7276/2433 St. Louis County Deed Book</b>		DATE OF AGREEMENT <b>See below</b>

MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) <b>Same as above</b>		
ADDRESS		
CITY	STATE	ZIP CODE
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):		DATE OF AGREEMENT

**NOTE:** Each site must be shown on a map and be included in a public notice and an approved mine plan.



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
**MINE PLAN**

P.O. BOX 176  
JEFFERSON CITY, MO 65102

TYPE OF PLAN (CHECK ONE):

☐ SHORT TERM, FOR ONE PERMIT YEAR

COMPANY NAME U.S. Silica Company

☒ LONG TERM, FOR PERIOD THROUGH DATE: 8/26/01 thru 8/26/16

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION AND TOPOGRAPHY.

This 15 year plan covers a total of 84 new acres. The strip/mine portion is 31 acres and the in-pit deposition and in-pit settling pond incorporates 53 acres. Approximately 4 acres are moderately wooded. The remaining acres in the strip/mine portion are considered gently rolling pasture land. The slopes of the future stripping and mining areas range from 2% to 20%. Topsoil is thin and rocky. (See attached map "detailed map,")

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OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

A. TOPSOIL

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES OR ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

All trees are cleared with dozers prior to topsoil removal. The top 12 inches of soil will be removed by scrapers or equivalent equipment and hauled to topsoil stockpiles and/or graded reclaimed areas. Normally, U.S. Silica strips and uncovers 2 to 3 acres for one year of mining. The topsoil removal is completed prior to overburden removal. Topsoil removal will be kept at least 20 feet ahead of the pit excavation.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

The topsoil will be relocated by scrapers to the topsoil stockpiles shown on map #0693241-PLANMAP. The topsoil piles will be shaped and seeded with grasses to minimize soil erosion.

**B. SPOIL****DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL**

Overburden removed during the 15 year plan will be deposited in the mined out portion of the 37 acre site and in the extreme northwestern portion of the 19.5 acre site under permit #526. The southern portion of the new proposed 53 acre site will also be utilized for overburden deposition. An access road will be constructed adjacent to the creek on the southern portion of the new 31 acre mine site.

The approximate fill height will be between a 500 to 525' mean sea level elevation. The terrain will be graded to a free draining topography traversable by farm equipment. The final banks of the fill areas will be sloped to a 3H:1V down to the estimated final water elevation of 465' MSL. Overburden will also be utilized for dike construction to increase the capacity of the in-pit settling and water clarification ponds.

**C. ACID MATERIALS****DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)**

No acid materials will be encountered in the above stripping.

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**D. PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)****DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS**

See attached map "detailed map"

YES NO

- |                          |                                     |   |
|--------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Will any excavation start at or within fifty feet (50') of any property line?<br>(NOTE: If the answer is "yes", a safety barrier may be needed.)  |

**RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2.**
**A. REVEGETATION** (Attach additional sheets, if needed)

Spring (March 15-May 15)

REVEGETATION MIX #1

PURPOSE OR LAND USE

**B. SEEDING OR PLANTING TIME**

Pasture Grass Mix

Pasture

Fall (Sept. 15-Nov. 15)

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring of fall. Following topsoil replacement, the seed mix will be broadcast and harrowed. After grass has grown sufficiently to control erosion, trees will be planted. The local conservation department will be contacted for final lime, fertilizer and species rates.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDED SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Typical: Ladino Or Red Clover Alfalfa Timothy Perennial Rye Orchard Grass Red Top	1 To 2# 5 To 8# 8 To 10# 2# 30# 3 To 5# 3 To 4#	White Pine Along Perimeter	300  <b>RECEIVED</b> JUL 26 2001 MISSOURI LAND RECLAMATION COMMISSION

REVEGETATION MIX #2

PURPOSE OR LAND USE

B. SEEDING OR PLANTING TIME

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDED SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

**B. GRADING****DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES**

Overburden removed during the 15 year plan will be deposited in the mined out portion of the 37 acre site and in the extreme northwestern portion of the 19.5 acre site under permit #526. The southern portion of the new proposed 53 acre site will also be utilized for overburden deposition.

The approximate fill height will be between a 500 to 525' mean sea level elevation. The terrain will be graded to a free draining topography traversable by farm equipment.

The final banks of the fill areas will be sloped to a 3H:1V down to the estimated final water elevation of 465' MSL.

See attached "Post Mining Land Use Map."

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MISSOURI LAND  
RECLAMATION**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES****GRADING**

Grading will be completed within 12 months of completion of mining in a given area or within 12 months of permit expiration or renewal.

**REPLACEMENT OF TOPSOIL**

Topsoil will be replaced within 12 months of completion of mining on a given area or within 12 months of permit expiration or renewal.

**REVEGETATION**

Seeding will be completed within 24 months of completion of mining on a given area or within 24 months of permit expiration or renewal.

AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)

12"

**D. USE OF LAND WHEN RECLAIMED**

Estimate acreage of each land use below, after reclamation

**ESTIMATED ACRES:**

Wildlife (forest or other habitat with livestock excluded)

36

Agricultural (pasture, cropland, and horticultural)

0

Development (residential, industrial, and recreational)

Water impoundments (for wildlife, agricultural, or development)

48

By my signature, I attest to the following:

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

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SIGNATURE OF APPLICANT <i>Robert Stalder</i>		TITLE Regional EHS Manager	DATE 7/23/01
NOTARY PUBLIC EMBOSSEER SEAL	STATE Illinois	COUNTY (OR CITY OF ST. LOUIS) LeSalle	
SUBSCRIBED AND SWORN BEFORE ME THIS 23 DAY OF July 2001		USE RUBBER STAMP IN CLEAR AREA BELOW	
NOTARY PUBLIC SIGNATURE <i>Pamela A. Burgwald</i>	MY COMMISSION EXPIRES 4/24/05	<div style="border: 2px solid black; padding: 5px; text-align: center;">"OFFICIAL SEAL" PAMELA A. BURGWALD Notary Public, State of Illinois My Commission Expires 04/24/05</div>	
NOTARY PUBLIC NAME (TYPED OR PRINTED) Pamela A. Burgwald			
APPROVED BY (DIRECTOR'S REPRESENTATIVE) <i>Tin Tha</i>	DATE APPROVED 8-6-01	PERMIT NUMBER 0524	



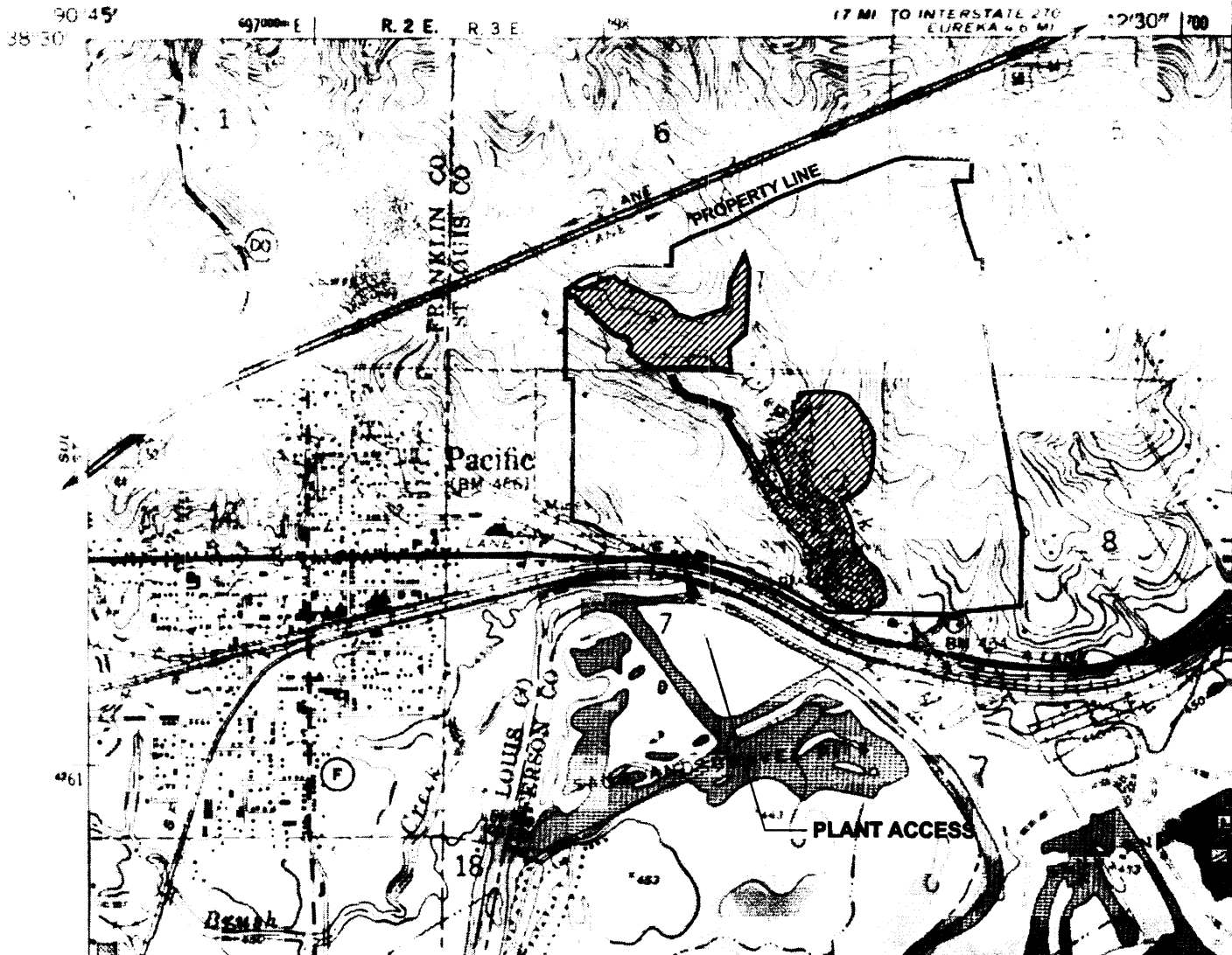
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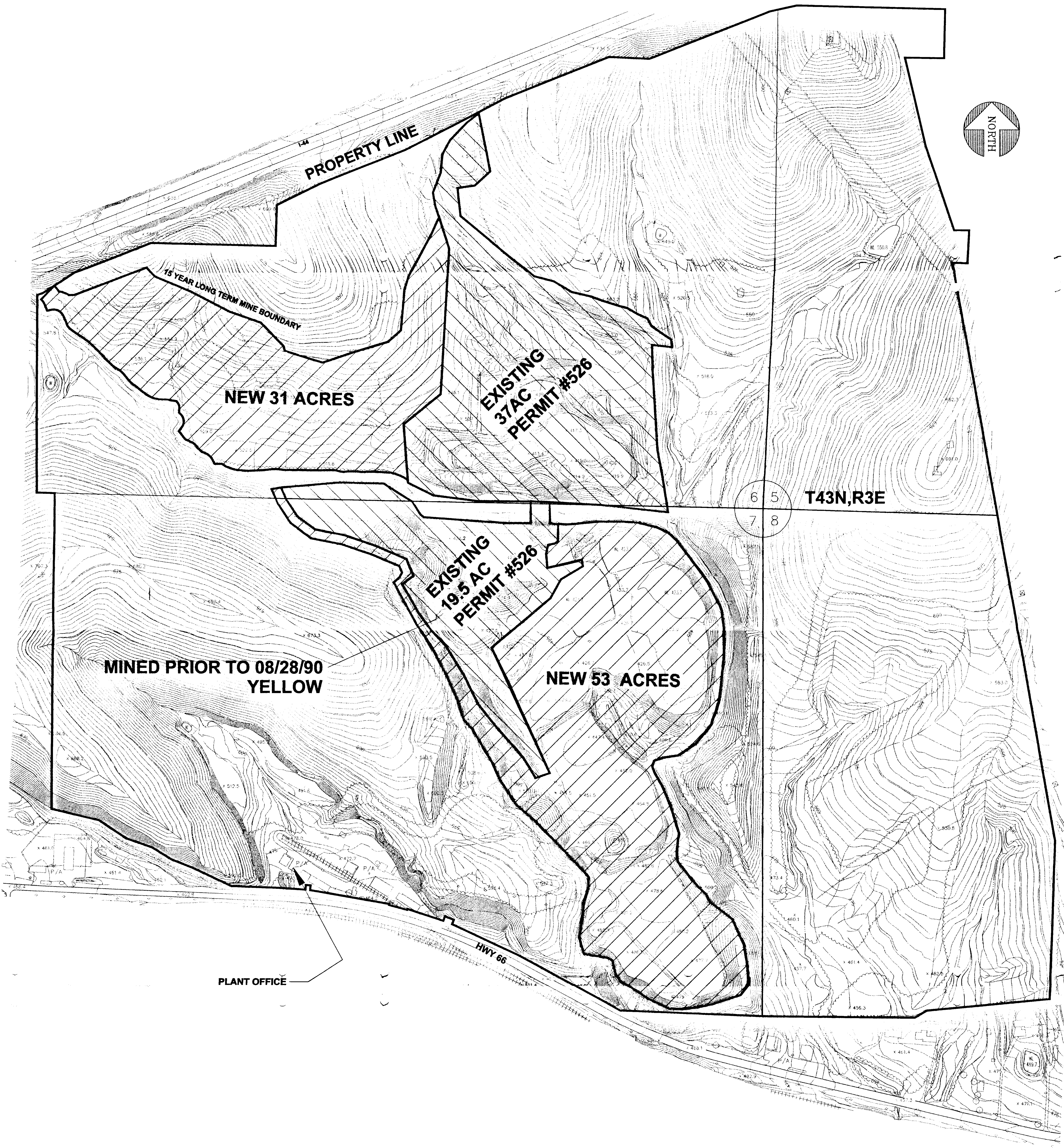
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY



**PACIFIC 7.5MIN QUADRANGLE  
SECTION 7&8, T43N, R3E**

<b>PERMIT APPLICATION</b>			
<b>84 NEW ACRES</b>			
		<small>COMPACTED RECONSTRUCTION RECEIVED BY SPECIAL, BY 10/11 2001 10/11</small>	
DRAWN: GMM		DATE: 7/17/01	
REV. #		DATE	
DRG. NO.		SCALE: 1"=2000'	
LOCATOR MAP		PAR. NO.	





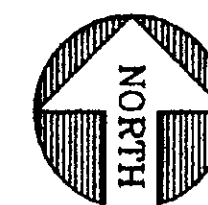
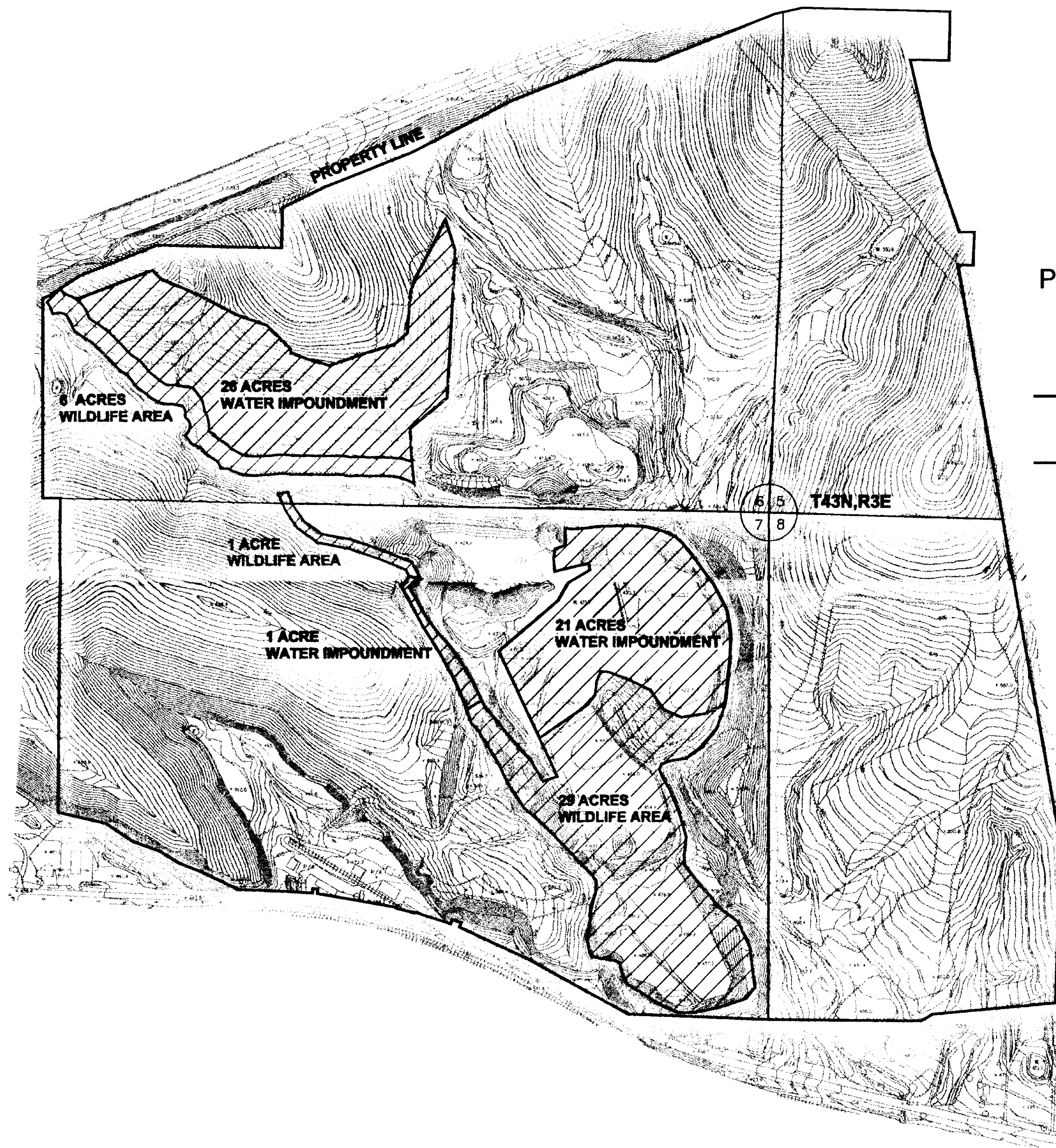
STATE OF MISSOURI  
INDUSTRIAL MINERAL MINES

PERMIT APPLICATION  
84 NEW ACRES

	CORPORATE HEADQUARTERS SILICA OF AMERICA, INC. (SILICA) 2001 2001	
	PLANT PROJECT NO.	PACIFIC
DRAWN REV. #	DATE 7/18/01	SCALE 1"=200'
DRG. NO.	DETAILED MAP	


APRIL 1998 TOPO MAP





POST MINING LAND USE

TYPE	NEW ACRES
WILDLIFE	36
WATER IMPOUNDMENT	48
TOTAL	84

PERMIT APPLICATION			
84 NEW ACRES			
		CORPORATE HEADQUARTERS BOWLING GREEN, KY 40301 (502) 338-2000	
		PLANT <b>PACIFIC</b>	PROJECT NO.
DRAWN GMM	DATE 7/18/01	SCALE 1"=400'	PAR NO.
REV. 0	DATE		
DRG. NO. <b>POST MINE USE MAP</b>			

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